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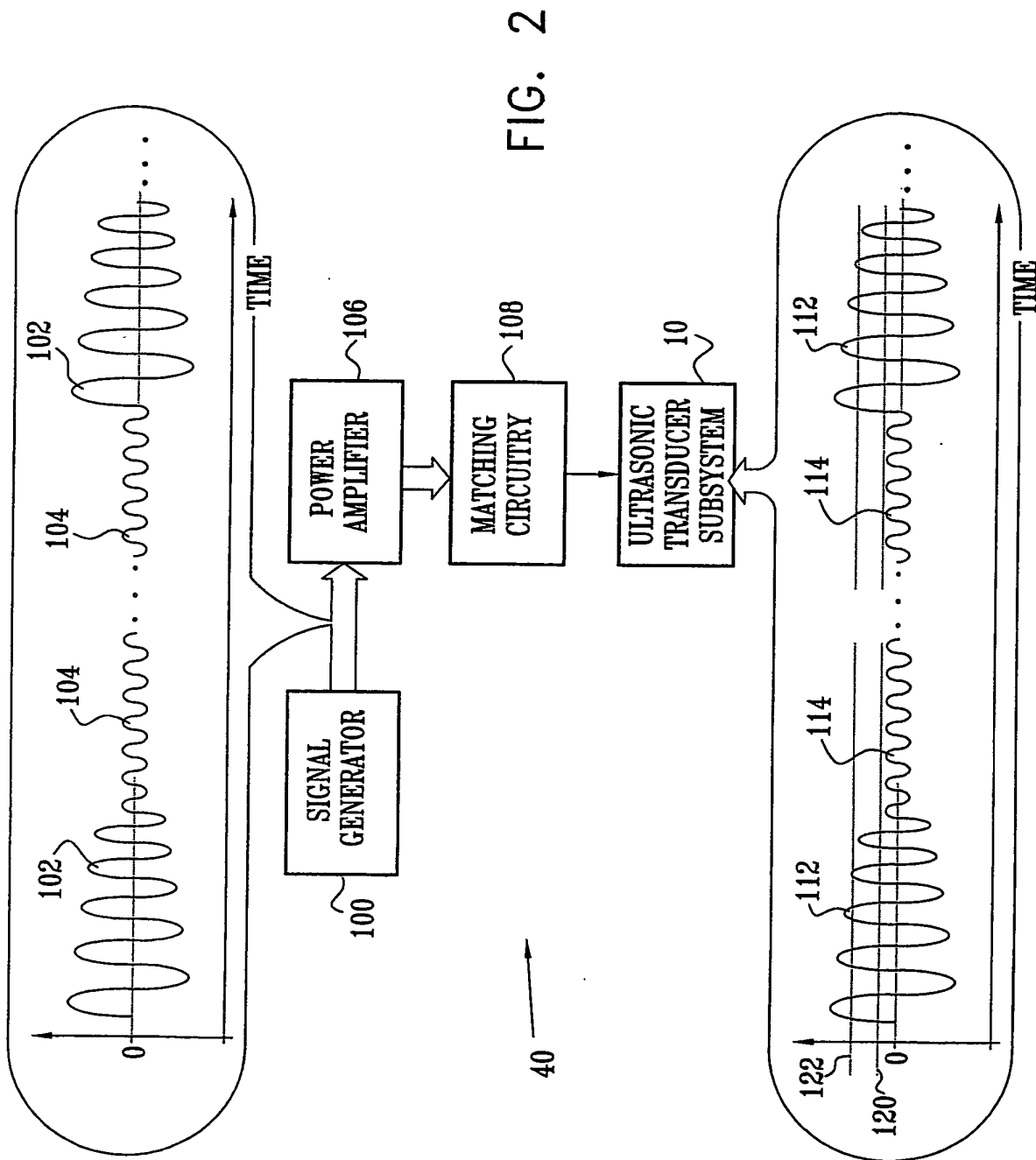
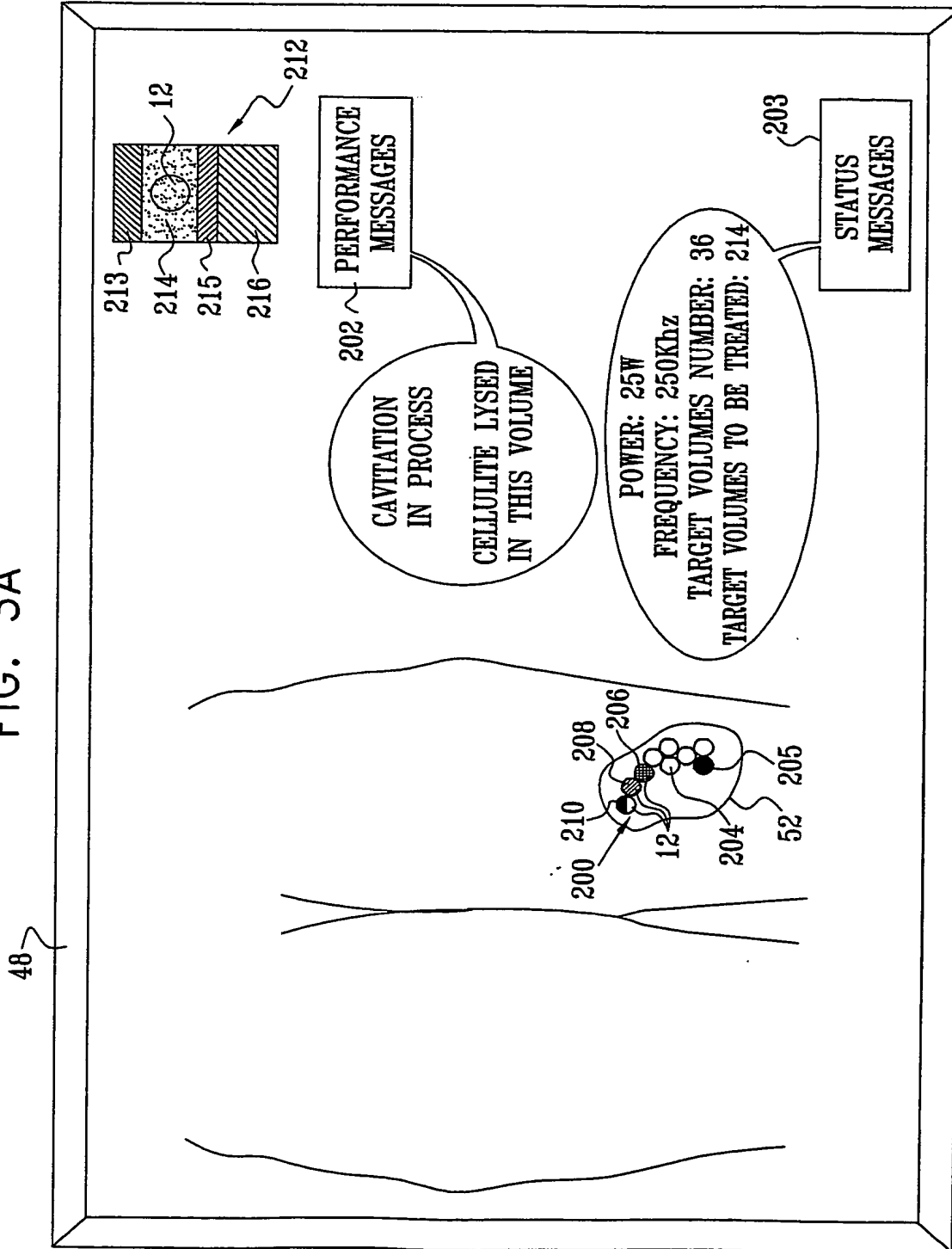
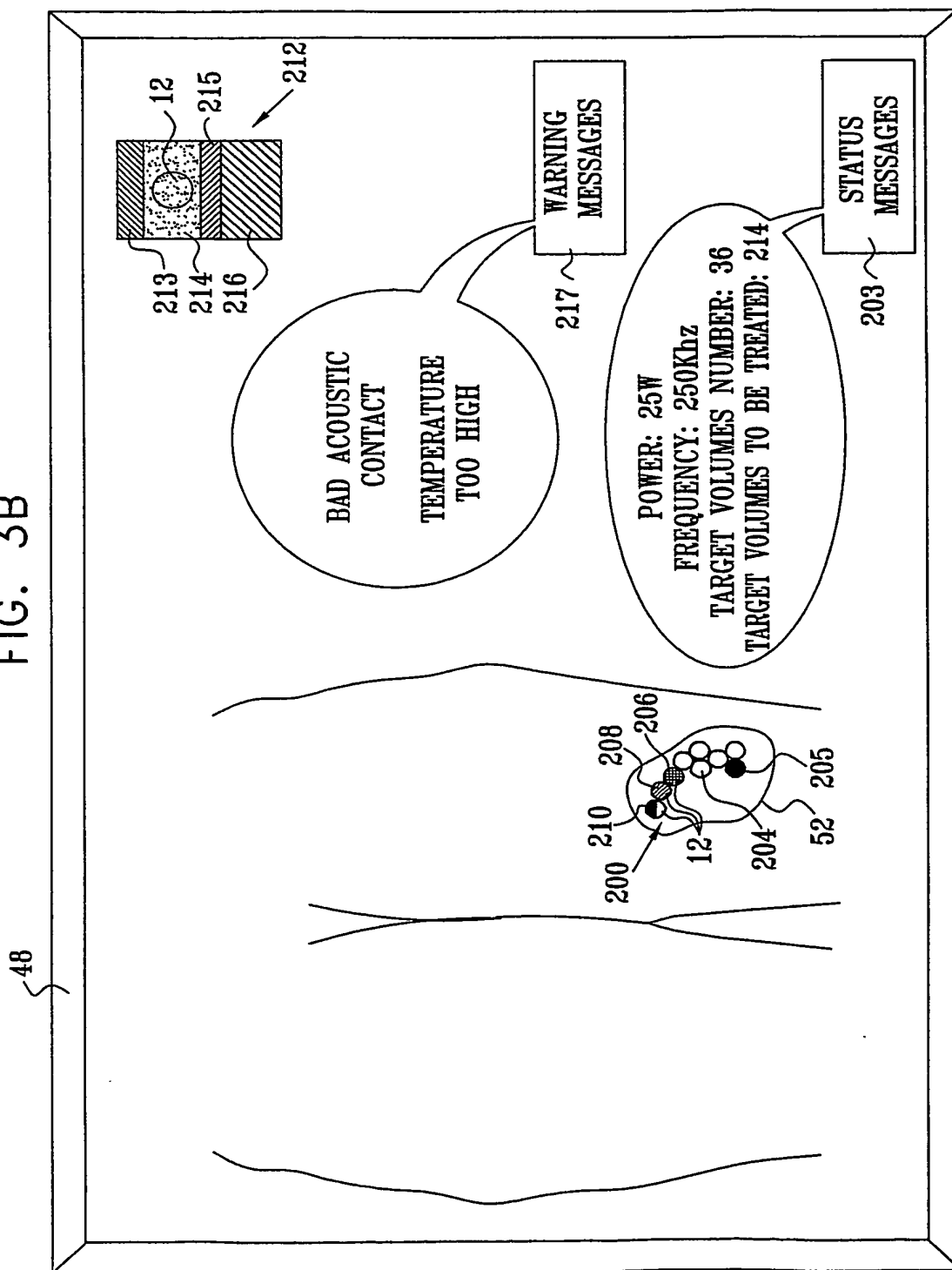


FIG. 3A

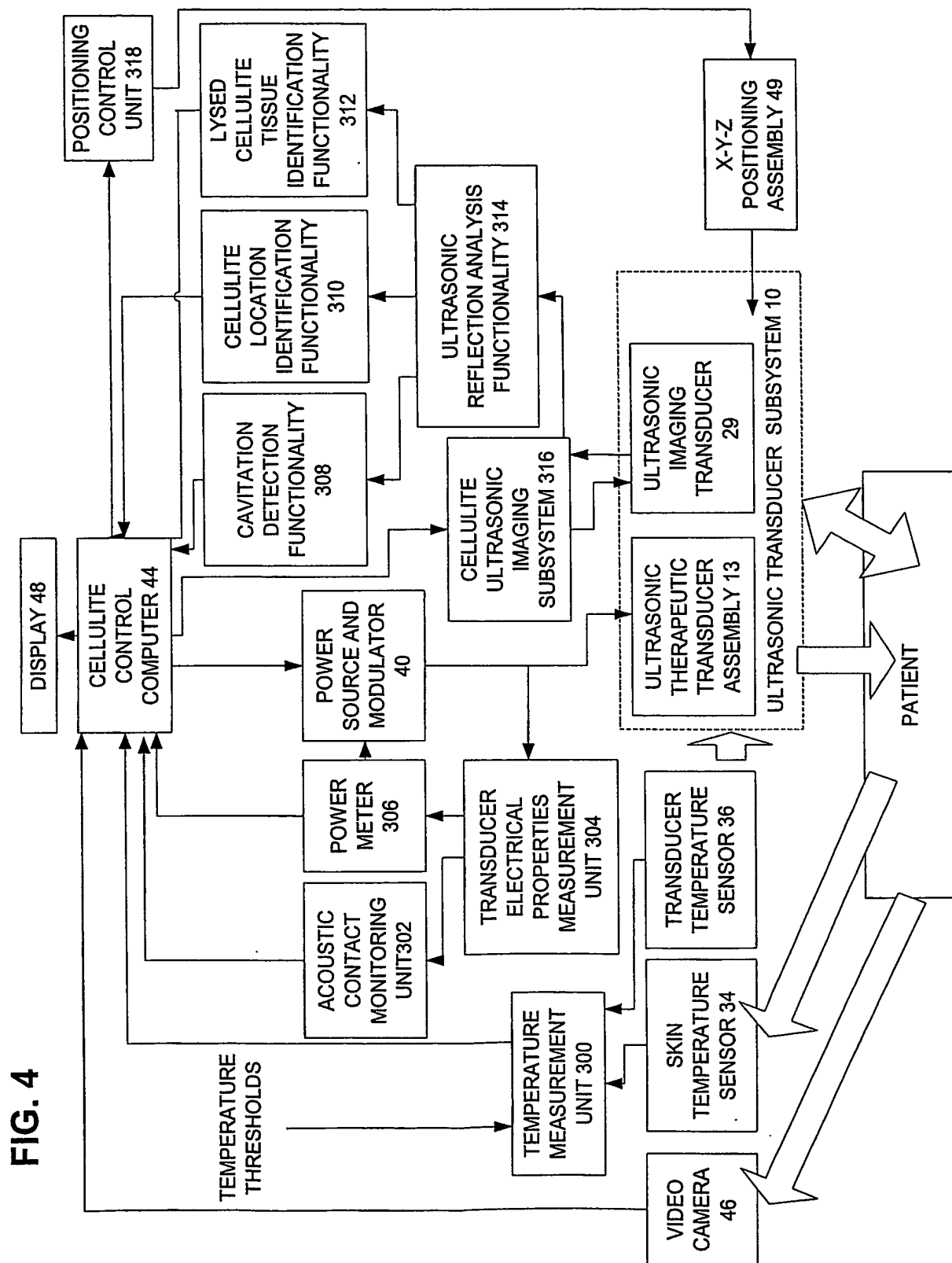


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FIG. 3B

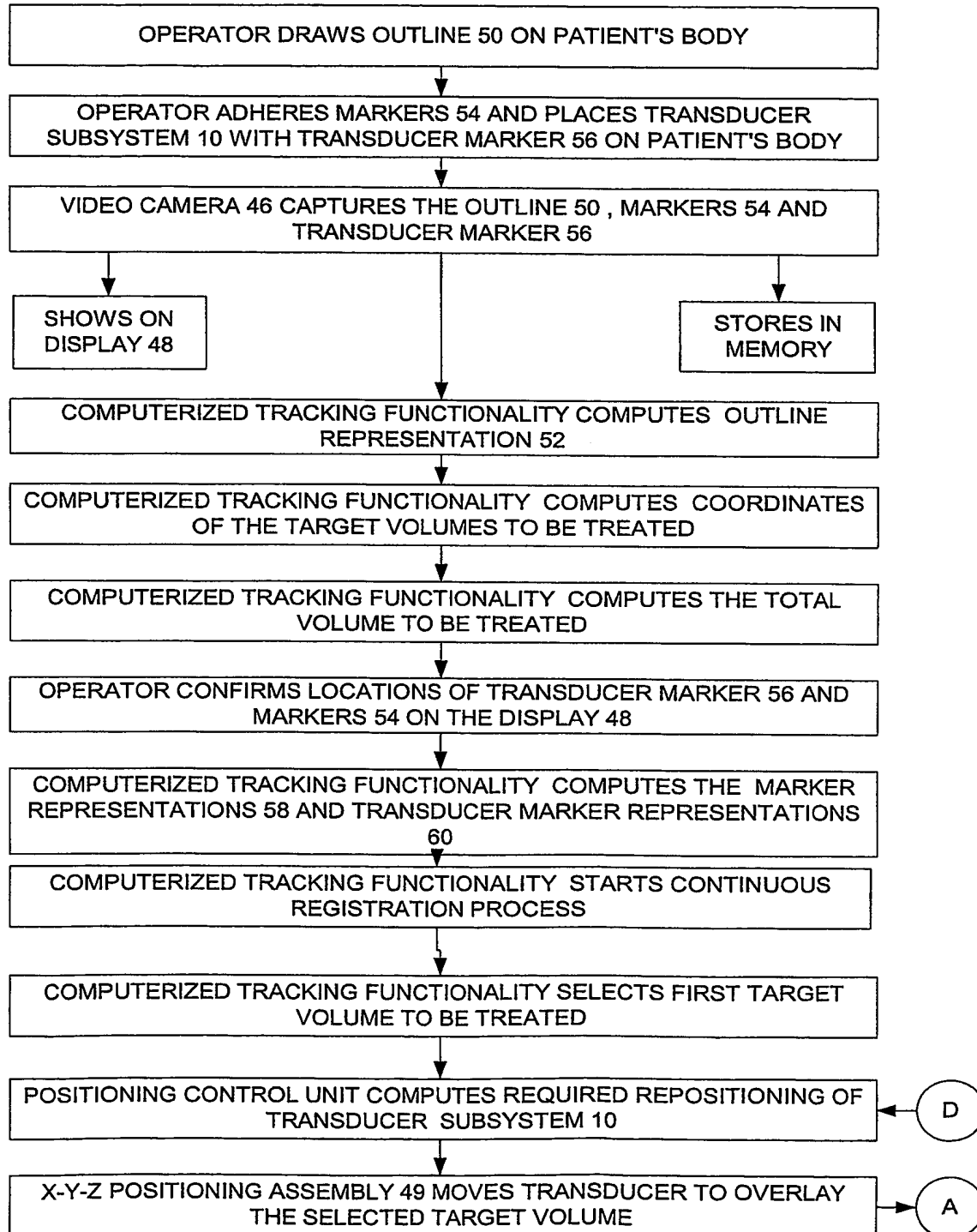


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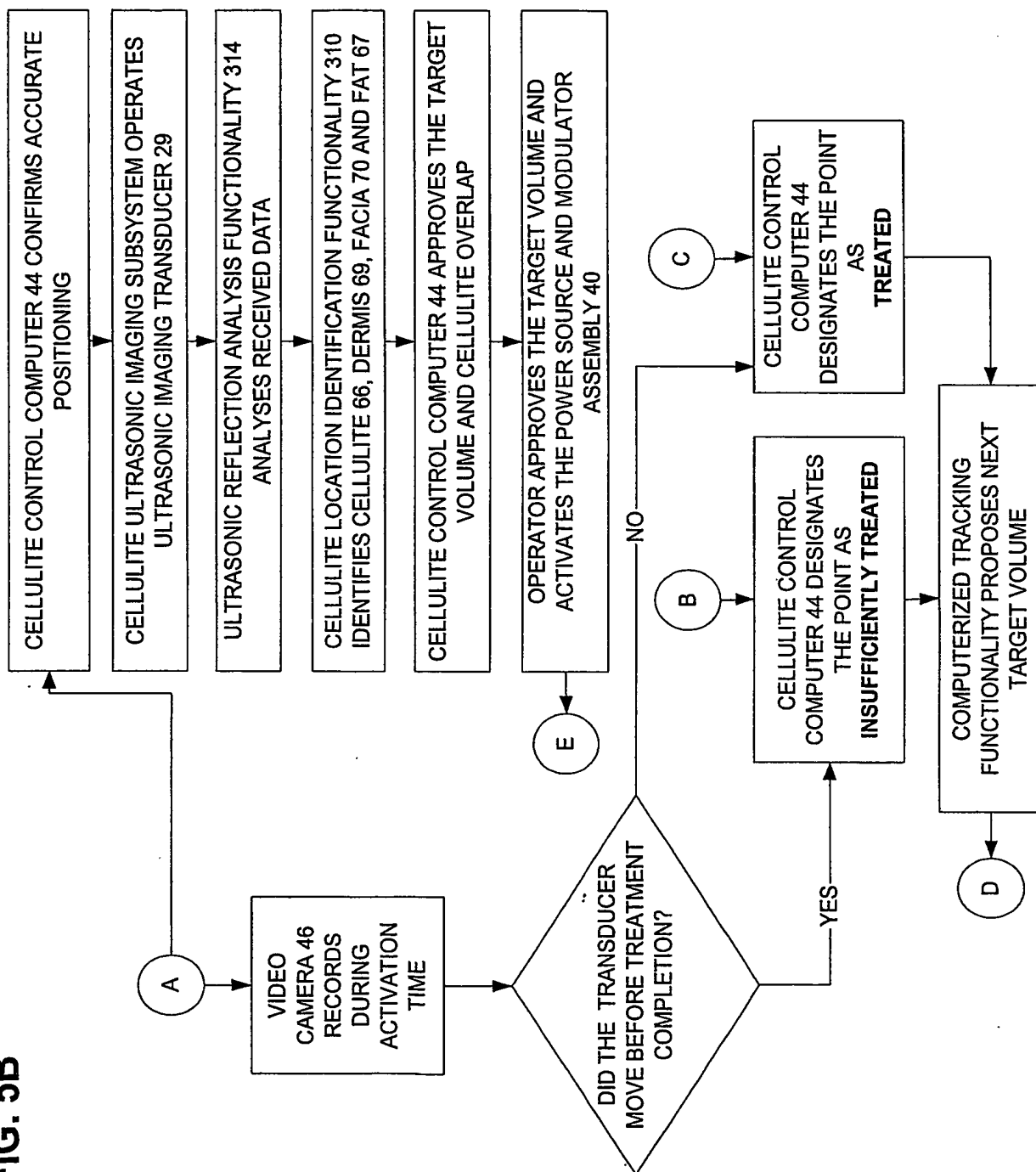
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FIG. 5A



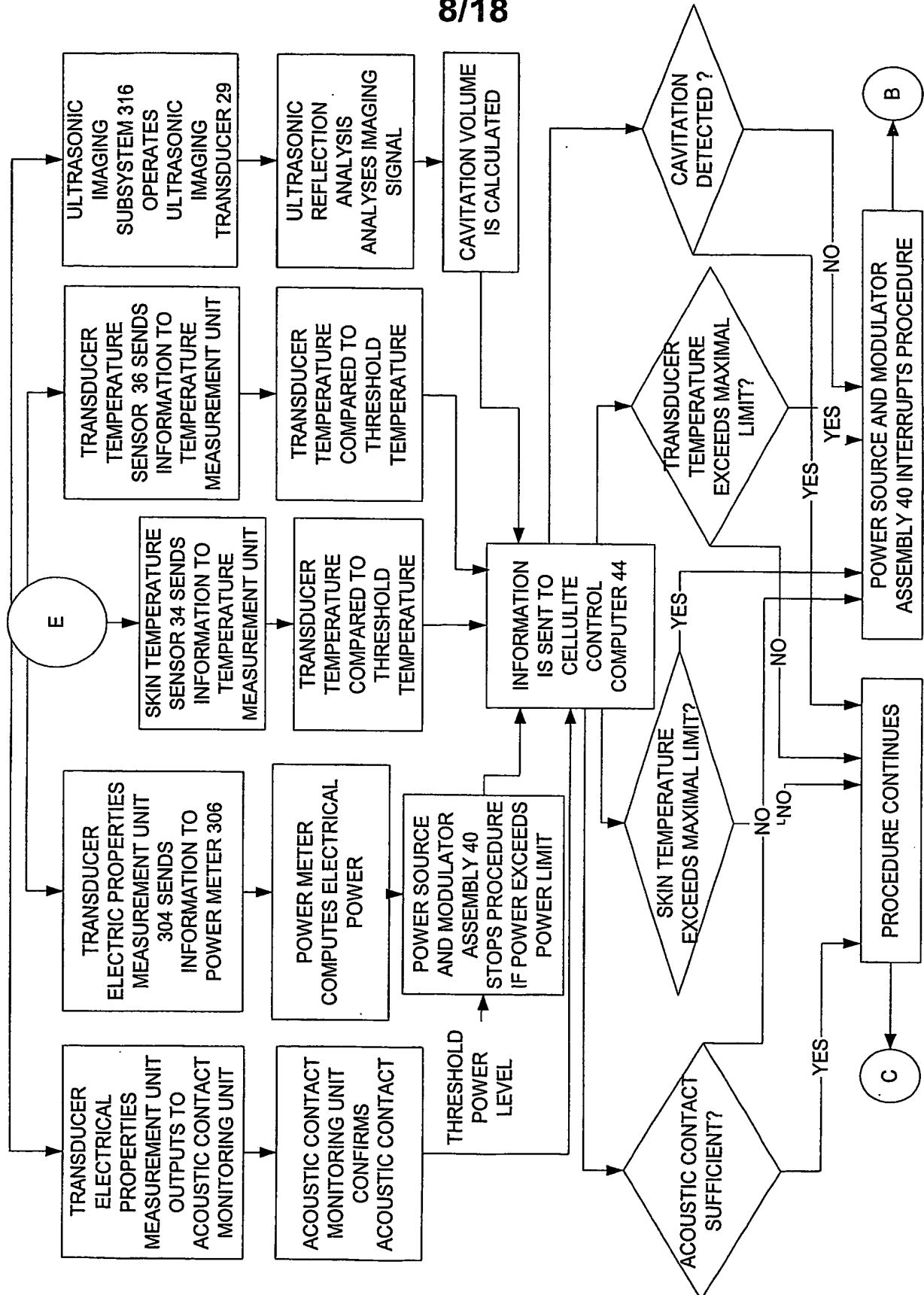
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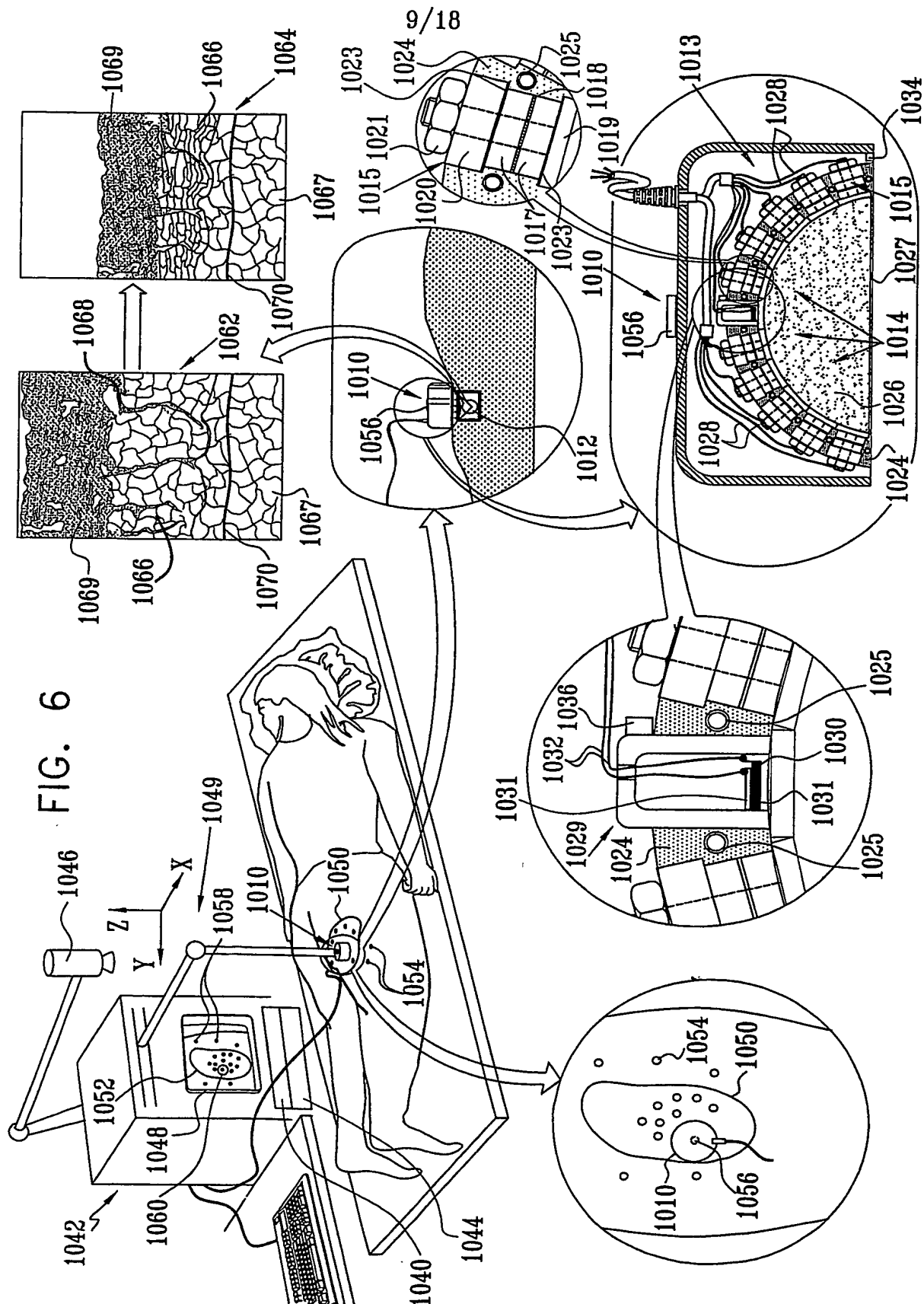
FIG. 5B



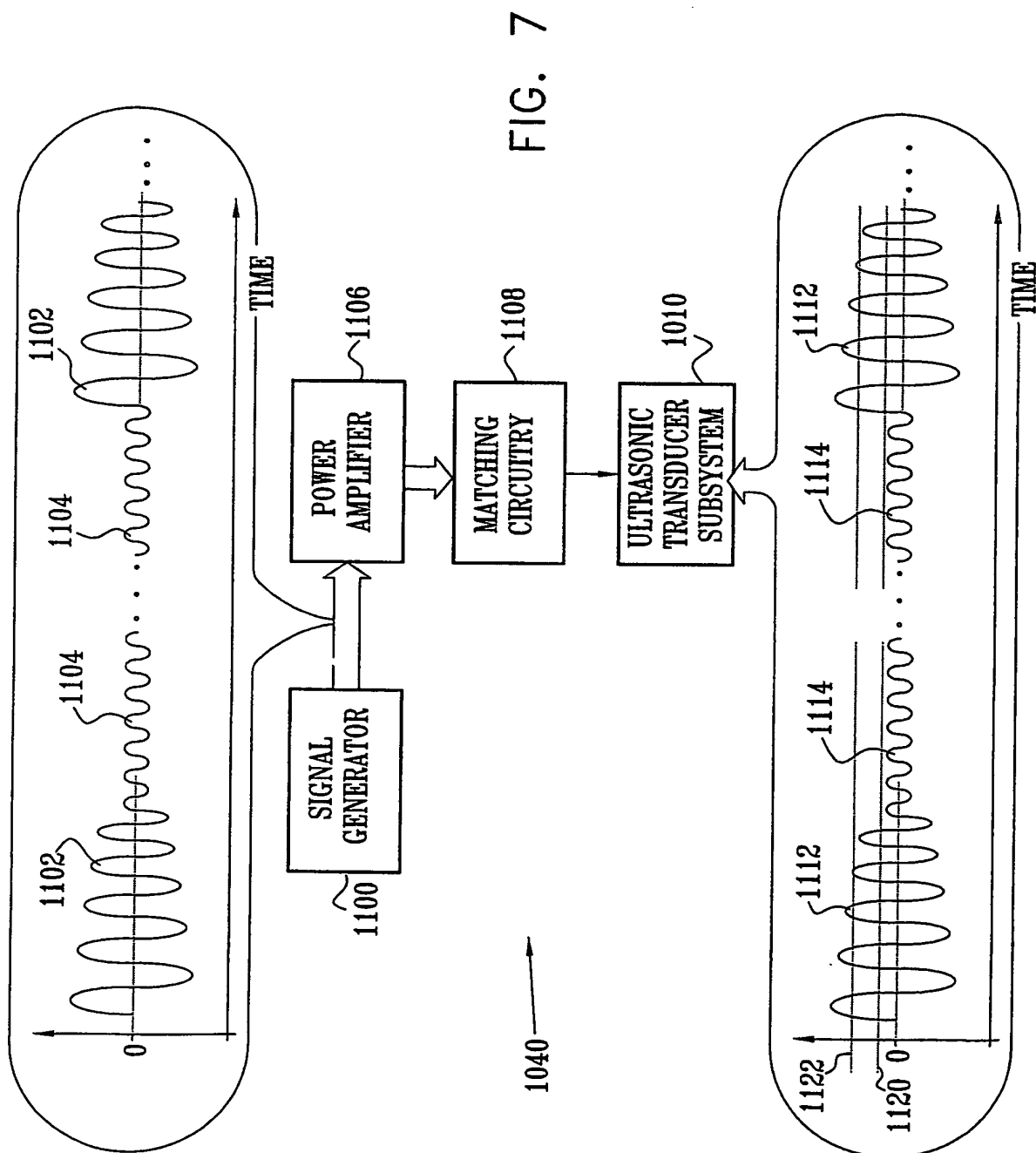
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FIG. 5C



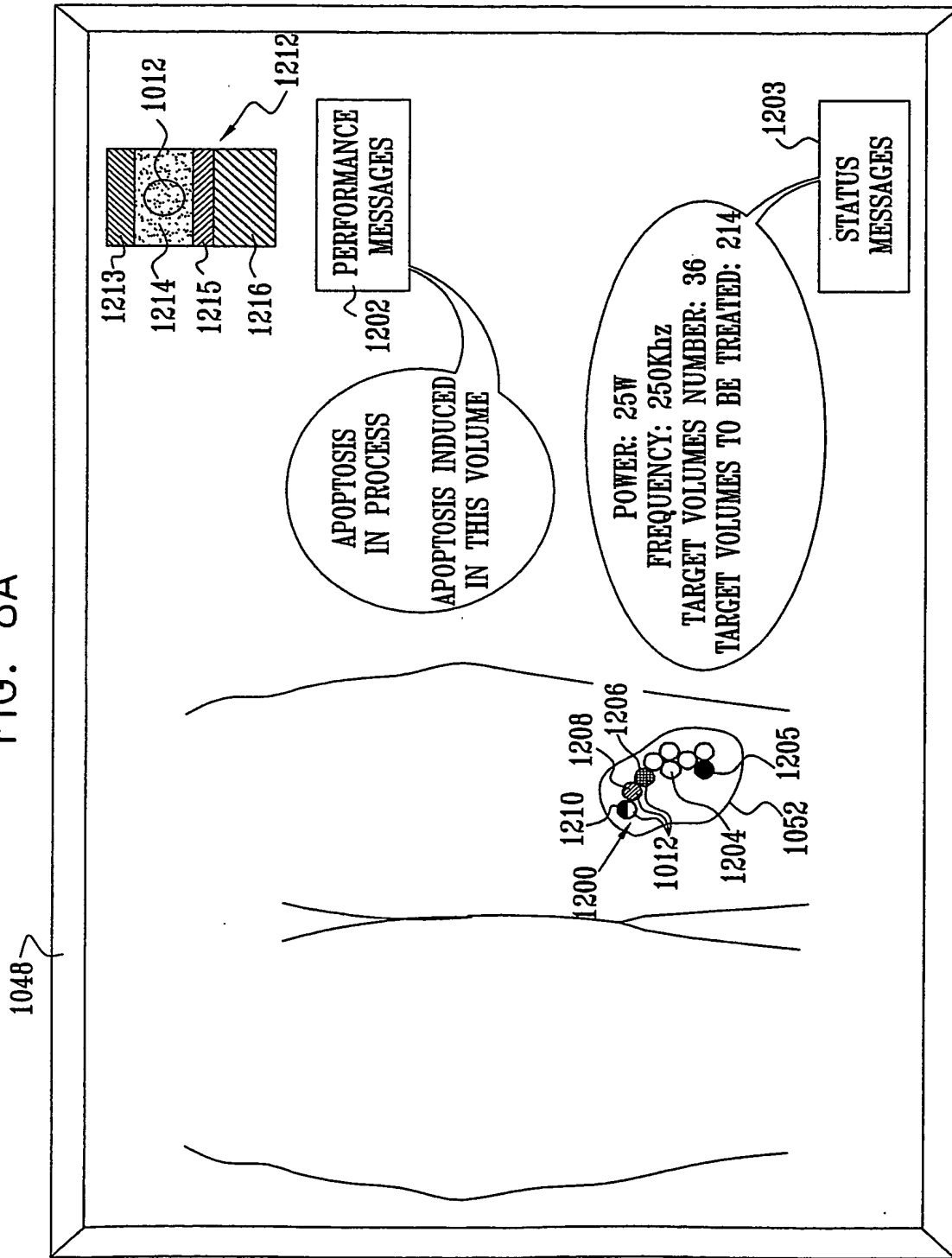


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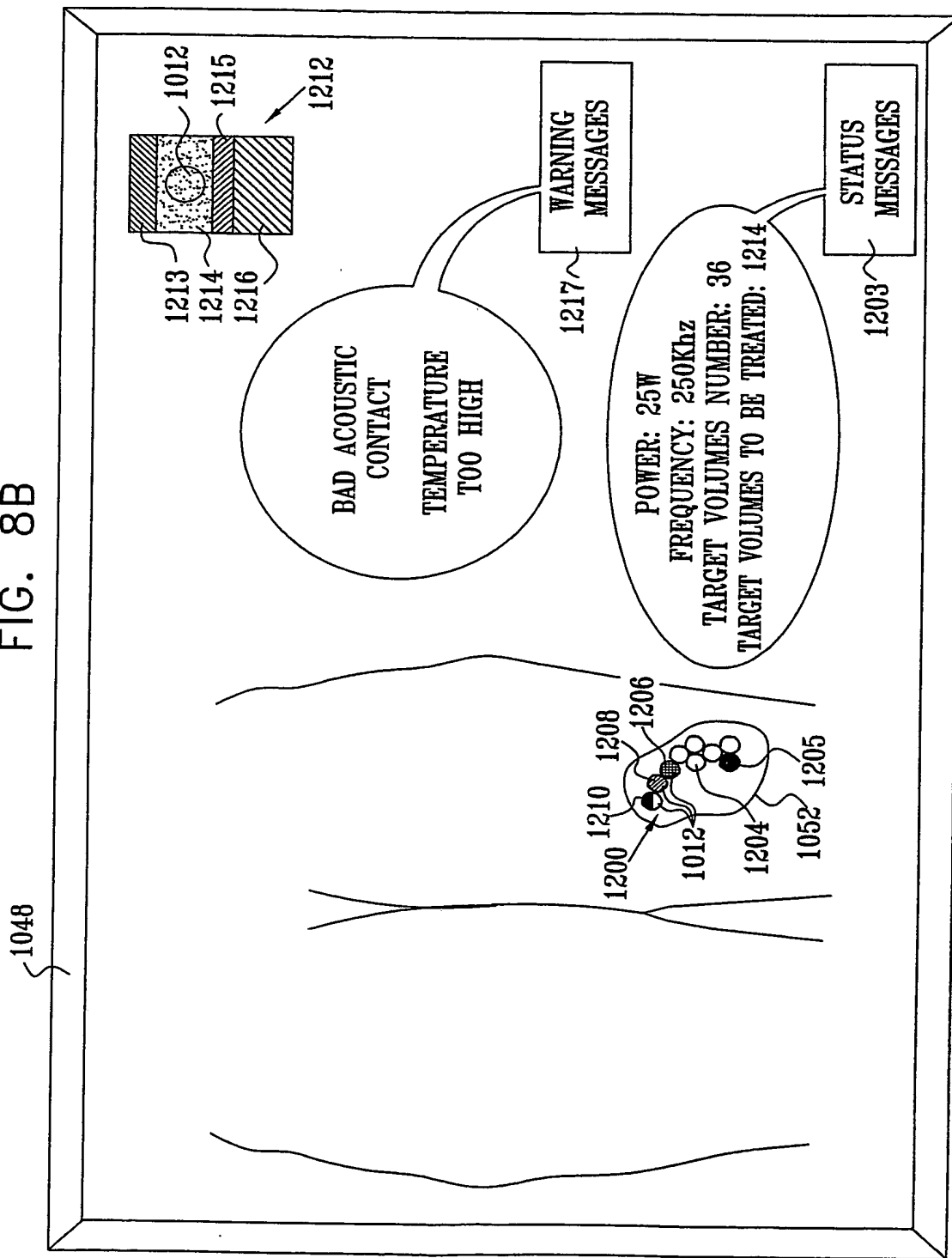
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FIG. 8A



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FIG. 8B



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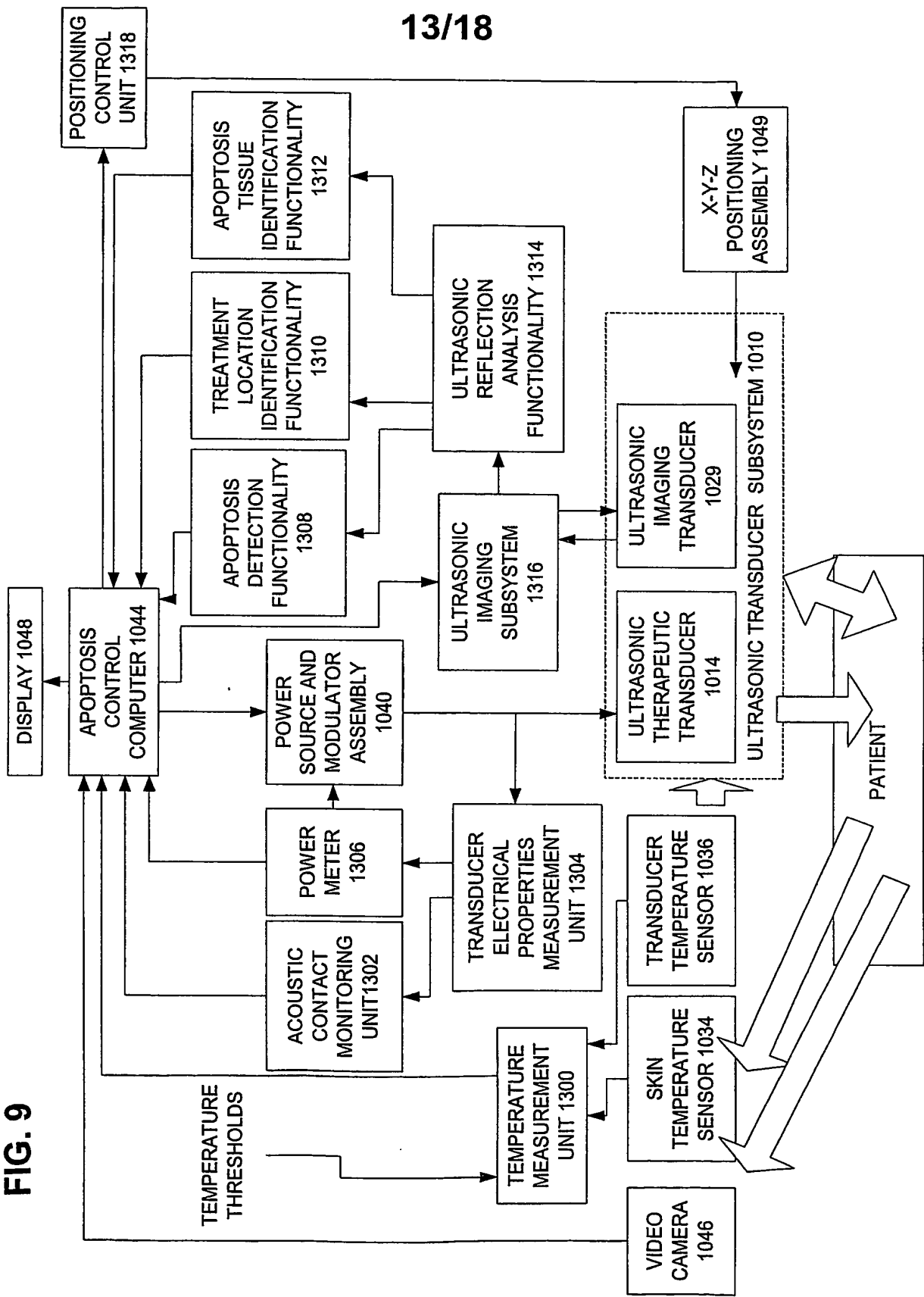
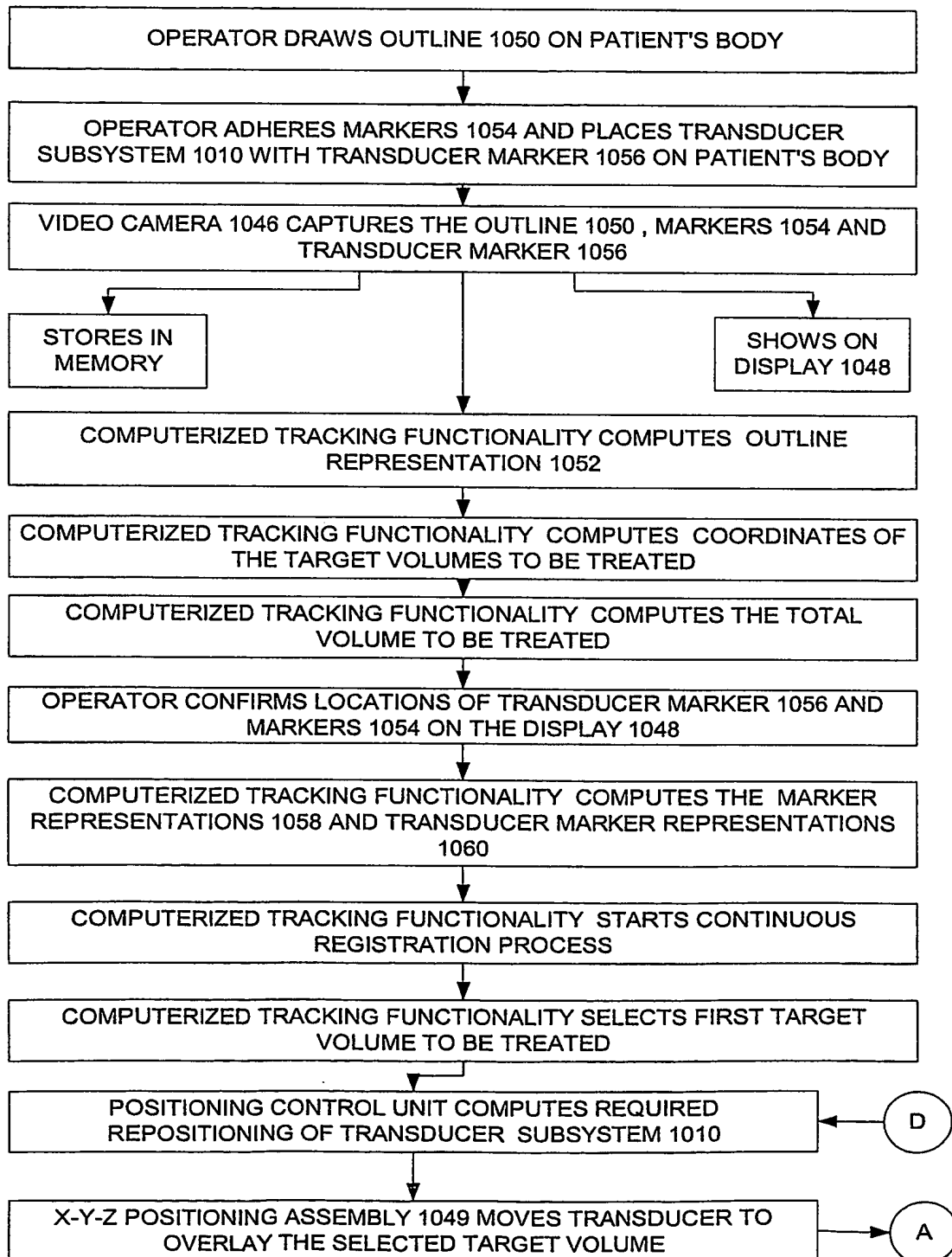


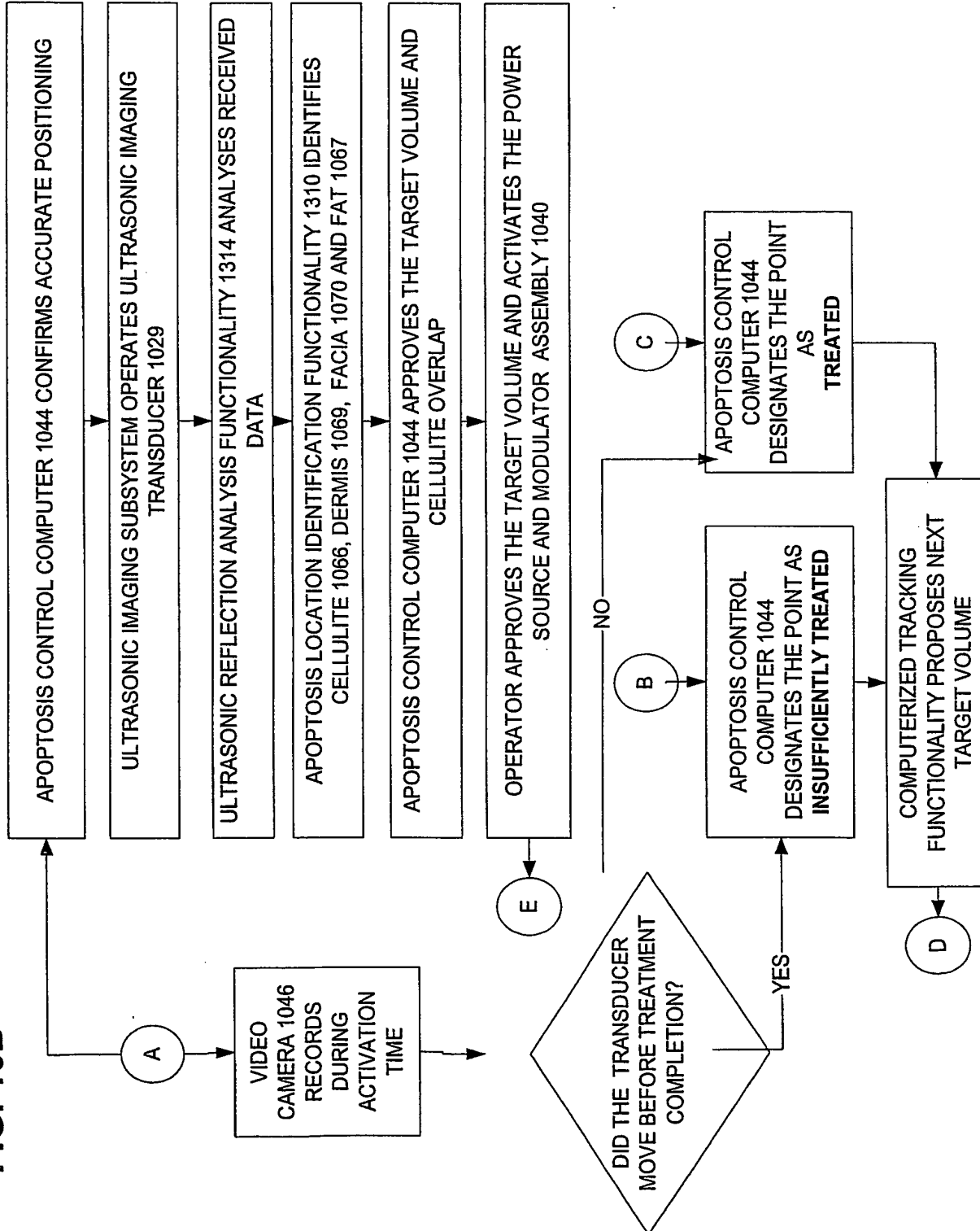
FIG. 10A

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FIG. 10B



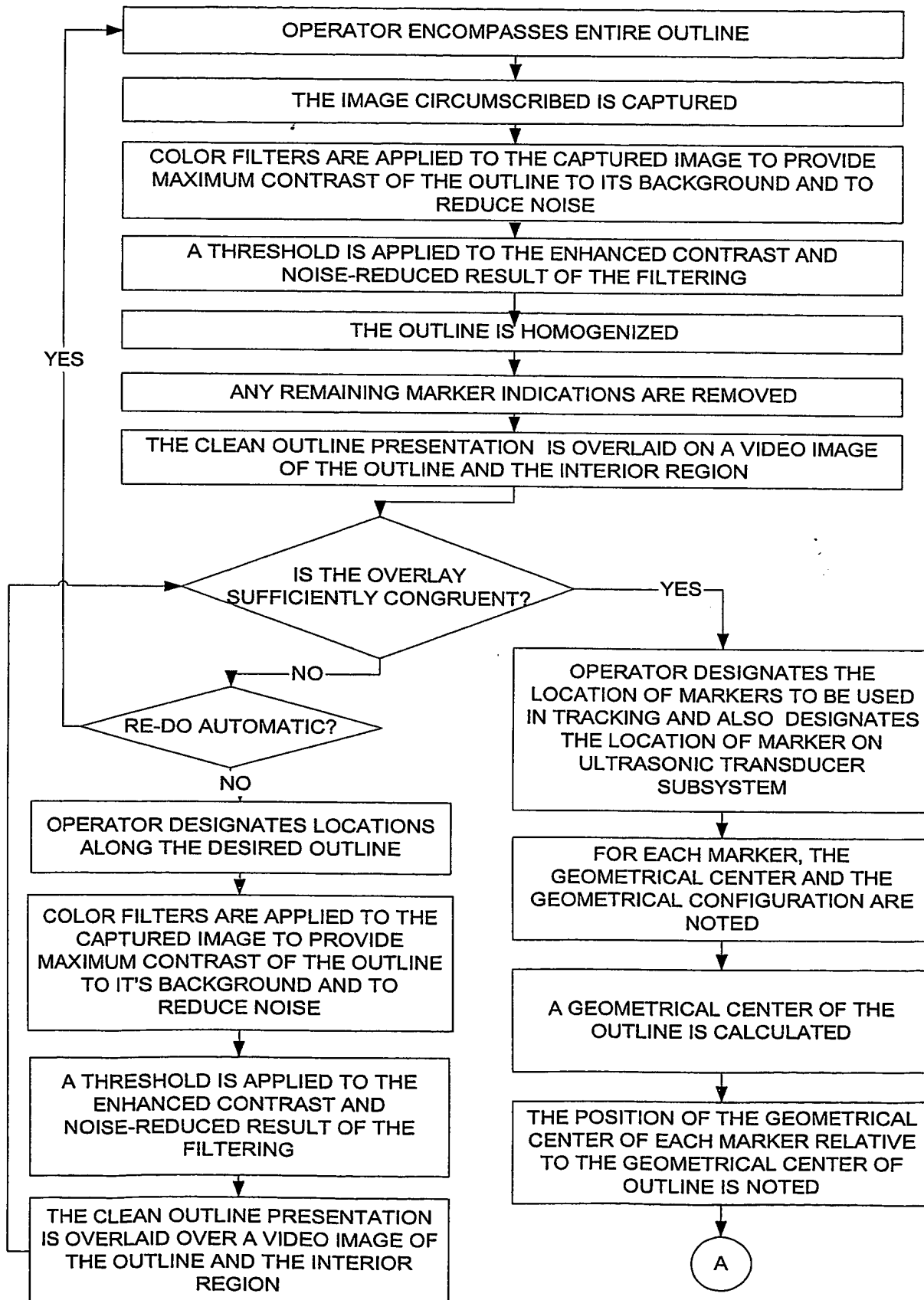
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```
graph TD
    E((E)) --> 1031[TRANSDUCER ELECTRICAL PROPERTIES MEASUREMENT UNIT 1031 OUTPUTS TO ACOUSTIC CONTACT MONITORING UNIT 1032]
    E --> 1034[TRANSDUCER ELECTRIC PROPERTIES MEASUREMENT UNIT 1034 SENDS INFORMATION TO POWER METER 1306]
    E --> 1036[TRANSDUCER TEMPERATURE SENSOR 1036 SENDS INFORMATION TO TEMPERATURE MEASUREMENT UNIT 1300]
    E --> 1038[ULTRASONIC IMAGING SUBSYSTEM 1316 OPERATES ULTRASONIC IMAGING TRANSDUCER 1029]
    1031 --> 1032[ACOUSTIC CONTACT MONITORING UNIT 1032 CONFIRMS ACOUSTIC CONTACT]
    1032 --> 1040[THRESHOLD POWER LEVEL]
    1034 --> 1306[POWER METER COMPUTES ELECTRICAL POWER]
    1306 --> 1040[POWER SOURCE AND MODULATOR ASSEMBLY 1040 STOPS PROCEDURE IF POWER EXCEEDS POWER LIMIT]
    1036 --> 1300[TEMPERATURE MEASUREMENT UNIT 1300]
    1300 --> 1314[TRANSDUCER TEMPERATURE COMPARED TO THRESHOLD TEMPERATURE]
    1314 --> 1044[INFORMATION IS SENT TO APOPTOSIS CONTROL COMPUTER 1044]
    1038 --> 1316[ULTRASONIC REFLECTION ANALYSIS 1314 ANALYSES IMAGING SIGNAL]
    1316 --> 1044[APOPTOSIS DETECTION IS IDENTIFIED]
    1040 --> 1044[INFORMATION IS SENT TO APOPTOSIS CONTROL COMPUTER 1044]
    1044 --> 1046{ACOUSTIC CONTACT SUFFICIENT?}
    1044 --> 1048{SKIN TEMPERATURE EXCEEDS MAXIMAL LIMIT?}
    1044 --> 1050{TRANSDUCER TEMPERATURE EXCEEDS MAXIMAL LIMIT?}
    1044 --> 1052{APOPTOSIS DETECTED?}
    1046 -- YES --> 1042[PROCEDURE CONTINUES]
    1046 -- NO --> 1040
    1048 -- YES --> 1040
    1048 -- NO --> 1042
    1050 -- YES --> 1040
    1050 -- NO --> 1042
    1052 -- YES --> 1040
    1052 -- NO --> 1042
    1042 --> C((C))
    C --> 1042
    1040 --> B((B))
    B --> 1040
```

The flowchart illustrates a system for monitoring and controlling the power source and modulator assembly 1040. The process begins at a start point E, which branches into four parallel monitoring paths. The first path involves a transducer electrical properties measurement unit 1031 outputting to an acoustic contact monitoring unit 1032, which confirms acoustic contact and triggers a threshold power level. The second path involves a transducer electric properties measurement unit 1034 sending information to a power meter 1306, which computes electrical power and triggers the power source and modulator assembly 1040 to stop the procedure if power exceeds a limit. The third path involves a transducer temperature sensor 1036 sending information to a temperature measurement unit 1300, which compares the temperature to a threshold and sends information to the apoptosis control computer 1044. The fourth path involves an ultrasonic imaging subsystem 1316 operating an ultrasonic imaging transducer 1029, which performs reflection analysis and sends an imaging signal to the apoptosis control computer 1044, identifying apoptosis detection. The apoptosis control computer 1044 then evaluates four conditions: acoustic contact sufficiency, skin temperature exceeding a maximal limit, transducer temperature exceeding a maximal limit, and apoptosis detection. If any of these conditions are met (YES), the power source and modulator assembly 1040 stops the procedure. If none are met (NO), the procedure continues. The process ends at a stop point B.

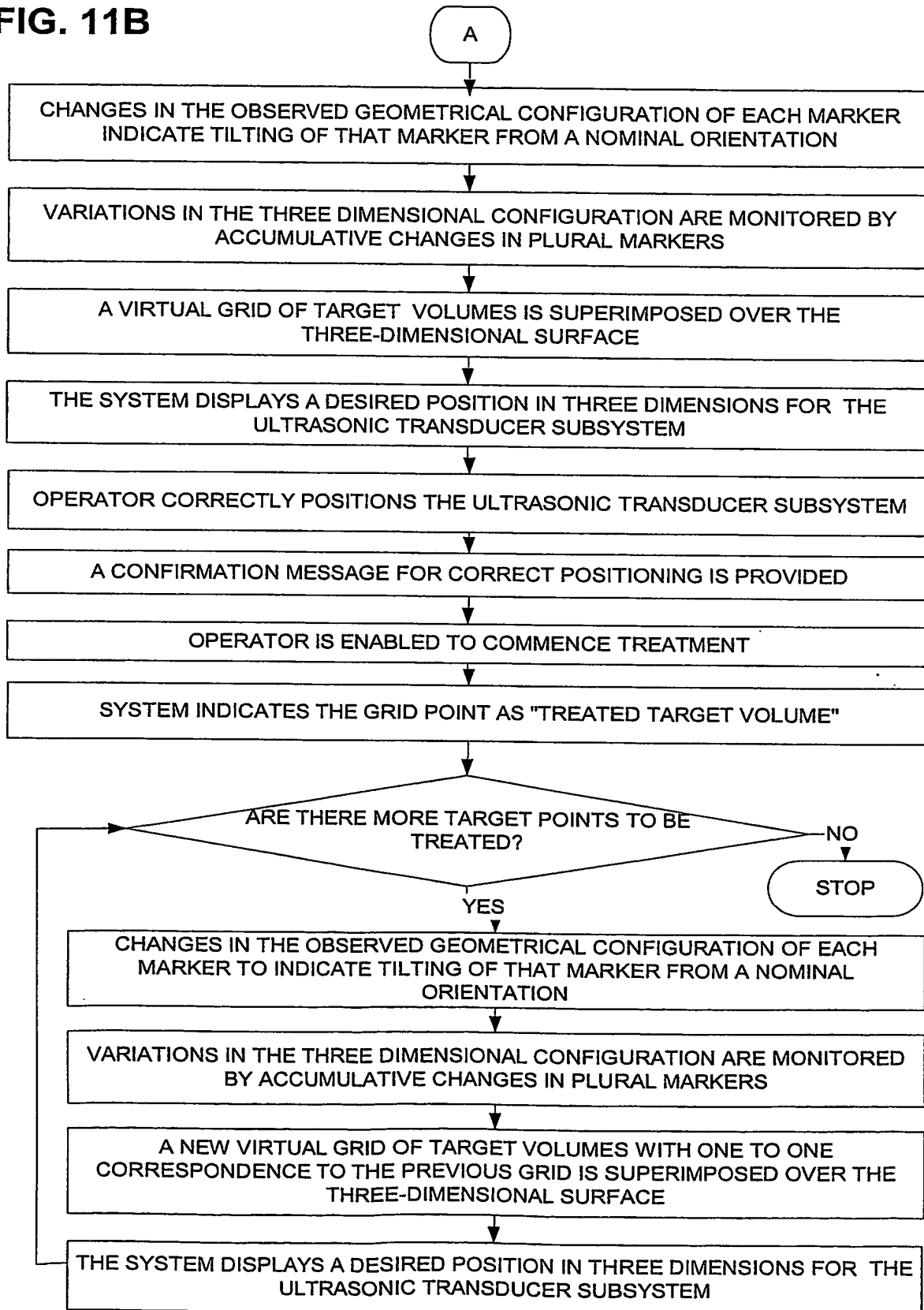
FIG. 11A

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FIG. 11B



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